

PATENT
Atty. Dkt. No. MRKS/0045.C1

REMARKS

This is intended as a full and complete response to the Office Action dated December 15, 2004, having a shortened statutory period for response set to expire on March 15, 2005. Claims 21-40 remain pending in the application and stand rejected. Applicants have cancelled claim 22 without prejudice and have amended the claims as shown above to more clearly recite implicit aspects of the invention. Applicants have also added new claims 41-43. Applicants submit that the proposed amendments and new claims can be found in the specification at least with reference to Figure 5 and therefore, do not add new matter.

The secondary references made of record are noted. However, it is believed that the secondary references are no more pertinent to the Applicant's disclosure than the primary references cited in the office action. Therefore, Applicant believes that a detailed discussion of the secondary references is not necessary for a full and complete response to this office action. Please reconsider the pending claims for reasons presented below.

Claim Rejections Under 35 U.S.C. § 112

Claims 24 and 31 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicants have amended claims 24 and 31 to obviate this rejection. Accordingly, withdrawal of the rejection is respectfully requested.

Claim Rejections Under 35 U.S.C. §§ 102 and 103

Claims 21-27, 30-35, and 38-40 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Hooper* (U.S. 4,630,691). Claims 28-29 and 36-37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Hooper* '691. The Examiner

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states that *Hooper* discloses an annulus bypass peripheral nozzle jet pump pressure differential drilling tool, which comprises all of the claimed structure and method using the same. The Examiner also states that the "means for adding energy to the drilling fluid is met by the combination of the jet pump J and the plug-stabilizer P which generate a pressure differential in the annulus such that the pressure of the drilling fluid above said means is higher than the drilling fluid pressure below, which is in communication with the formation."

Applicants have amended the claims, which obviates the rejections. *Hooper* discloses a flow restriction plug that expands and engages the wellbore to "isolate the bit zone from the drill pipe zone during the drilling operation." See *Hooper* at col. 2, lines 21-23. In other words, the plug anchors the drill string and blocks flow through the annulus between the drill string and wellbore. The tool of *Hooper* also includes an interior to establish a "jet pump feature." See *Hooper* at col. 3 lines 21-25. The jet pump uses a portion of the drilling fluid to mix and create a boost in pressure for a portion of drilling fluid that is bypassed around the restriction plug. See *Hooper* at Figures 2-6. *Hooper* does not teach, show, or suggest adding energy to the fluid in the annulus to increase a force asserted against a bottom surface of the wellbore by the drill string, as recited in base claims 21 and 39, as well as those dependent therefrom. Similarly, *Hooper* does not teach, show, or suggest adding energy into the circulating fluid in the annulus to decrease a force asserted on the formation of interest by the circulating fluid in the annulus, as recited in base claim 32 as well as those dependent therefrom. Furthermore, *Hooper* does not teach, show, or suggest extracting energy from the fluid in the drill string and transferring at least a portion of the energy through a pressure-bearing boundary of the drill string to the fluid flowing in the annulus, as recited in new claim 41 as well as those dependent therefrom. For at least these reasons, withdrawal of the rejection and allowance of the claims is respectfully requested.

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Conclusion

In conclusion, the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed. Having addressed all issues set out in the office action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,

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